Sub B2 A2

5.(Amended) Apparatus according to claim 1, comprising an electrical activity sensor for sensing electrical activity of said cell and wherein said power source electrifies said electrode at a frequency higher than a sensed depolarization frequency of said cell, thereby causing said cell to depolarize at the higher frequency.

6.(Amended) Apparatus according to claim 1, wherein said pulse is designed to extend a plateau duration of an action potential of said cell, thereby allowing more calcium inflow into the cell.

Sub A3 B2

10.(Amended) Apparatus according to claim 1, comprising at least a second electrode adjacent for electrifying a second cell or group of insulin secreting cells, wherein said controller electrifies said second electrode with a second pulse different from said first electrode.

14.(Amended) Apparatus according to claim 1, wherein said controller electrifies said at least one electrode with a pacing pulse having a sufficient amplitude to force a significant portion of said cells to depolarize, thus aligning the cells' action potentials with respect to the non-excitatory pulse electrification.

Sub B2

15.(Amended) Apparatus according to claim 1, wherein said controller synchronizes the electrification of said electrode to a burst activity of said cell.

16.(Amended) Apparatus according to claim 1, wherein said controller synchronizes the electrification of said electrode to an individual action potential of said cell.

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17.(Amended) Apparatus according to claim 1, wherein said controller does not synchronize the electrification of said electrode to electrical activity of said cell.

18.(Amended) Apparatus according to claim 1, wherein said controller does not apply said pulse at every action potential of said cell.

19.(Amended) Apparatus according to claim 1, wherein said controller does not apply said pulse at every burst activity of said cell.

20.(Amended) Apparatus according to claim 1, wherein said pulse has a duration of less than a single action potential of said cell.

22.(Amended) Apparatus according to claim 1, wherein said pulse has a duration of longer than a single action potential of said cell.

23.(Amended) Apparatus according to claim 1, wherein said pulse has a duration of longer than a burst activity duration of said cell.

24.(Amended) Apparatus according to claim 1, wherein said controller determines said electrification in response to a pharmaceutical treatment applied to the cell.

26.(Amended) Apparatus according to claim 24, wherein said controller applies said pulse to counteract adverse effects of said pharmaceutical treatment.

27.(Amended) Apparatus according to claim 24, wherein said controller applies said pulse to synergistically interact with said pharmaceutical treatment.

28.(amended) Apparatus according to claim 24, wherein said controller applies said pulse to counteract adverse effects of pacing stimulation of said cell.

29.(Amended) Apparatus according to claim 1, comprising an alert generator.

35.(Amended) A method according to claim 32, comprising applying a plurality of pulses in a sequence designed to achieve a desired effect on said at least a part of a pancreas.